UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/48/6 (Sect. 29)
12 October 1993

ORIGINAL: ENGLISH

Forty-eighth session

PROPOSED PROGRAMME BUDGET FOR THE BIENNIUM 1994-1995*

PART XI. CAPITAL EXPENDITURES

Section 29. *Technological innovations*

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* The present document contains section 29 of the proposed programme budget for the biennium 1994-1995. The complete proposed programme budget will subsequently be issued in final printed form as *Official Records of the General Assembly, Forty-eighth Session, Supplement No. 6* (A/48/6/Rev.1).

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PART XI

CAPITAL EXPENDITURES

SECTION 29. TECHNOLOGICAL INNOVATIONS*

Overview

TABLE 29.1. SUMMARY OF 1994-1995 REQUIREMENTS BY PROGRAMME

(Thousands of United States dollars)

(1) Regular budget

	1992-1993 revised appropriation	*Resource growth*		*Total before recosting*	*Recosting*	*1994-1995 estimates*
		Amount	*Percentage*			
A. Integrated Management Information System	-	13 028.7	-	13 028.7	658.7	13 687.4
B. Optical disk storage and retrieval system	-	5 132.0	-	5 132.0	276.7	5 408.7
Total, regular budget	-	**18 160.7**	-	**18 160.7**	**935.4**	**19 096.1**

(2) Extrabudgetary resources

1992-1993 estimated expenditures		*Source of funds*	*1994-1995 estimated expenditures*
		(a) Services in support of:	
		(i) Other United Nations organizations	
-		Support to extrabudgetary administrative structures	-
		(ii) Extrabudgetary programmes	
-		Support to extrabudgetary substantive activities	140.3
1 064.4		Technical cooperation reimbursement resources	2 957.9
3 297.2		Peace-keeping operations	3 211.7
Total *(a)*	**4 361.6**		**6 309.9**
		(b) Substantive activities	
		Trust Fund for Management Improvement	
30.6		and Systems Development	-
Total *(b)*	**30.6**		-
-		*(c)* Operational projects	-
Total *(c)*	-		-
Total *(a)*,*(b)* and *(c)*	**4 392.2**		**6 309.9**
		Total costs	**25 406.0**

* Formerly budgeted under the Department of Administration and Management (see sects. 25A and 25E).

TABLE 29.2. SUMMARY OF 1994-1995 ESTIMATES BY OBJECT OF EXPENDITURE

(Thousands of United States dollars)

Object of expenditure	*1992-1993 revised appropriation*	*Resource growth*		*Total before recosting*	*Recosting*	*1994-1995 estimates*
		Amount	*Percentage*			
Staff costs	-	526.1	-	526.1	39.7	565.8
General operating expenses	-	3 098.3	-	3 098.3	167.6	3 265.9
Furniture and equipment	-	3 576.0	-	3 576.0	192.7	3 768.7
Other expenditures	-	10 960.3	-	10 960.3	535.4	11 495.7
Total	**-**	**18 160.7**	**-**	**18 160.7**	**935.4**	**19 096.1**

Overview

29.1 The activities under this section are undertaken to implement subprogramme 4, Technological innovations policies, of programme 40, Administrative direction and management, of major programme X, Administrative services, of the medium-term plan for the period 1992-1997, as revised (A/47/6/Rev.1). The main objective of the subprogramme is to develop and coordinate the establishment of policies and procedures related to the introduction of technological innovations at all duty stations of the Secretariat and to ensure adherence to standards and compatibility of technology among duty stations. The advent of improved telecommunications and the requirements for fast and simple electronic voice exchange among all duty stations have created the need to harmonize existing technologies, prevent future incompatibilities and ensure efficient and cost-effective use of the technologies. Efforts will be targeted at integrating duty stations into a fully functioning data-processing and communications network through the development, coordination and monitoring of policies, strategies and standards on an organization-wide basis.

29.2 The Technological Innovations Board, an interdepartmental board under the chairmanship of the Under-Secretary-General for Administration and Management, was established in June 1986. Its terms of reference were expanded in December 1991 to include all aspects of office automation, as represented by software and hardware related to microcomputers and minicomputers, and all aspects of mainframe computer applications and operations, and local and global telecommunications. The Board determines and promulgates policies, standards and procedures relating to the acquisition and use of advanced technology, including selection criteria and applications development.

29.3 The Integrated Management Information System (IMIS), the first phase of which was approved by the General Assembly in section XII of its resolution 43/217 of 21 December 1988, is a significant step towards the electronic integration of offices performing administrative tasks regardless of location. IMIS will replace the numerous independent systems, many of which, built many years ago and mostly for regular budget activities, are no longer able to provide the support needed by management at a time of rapidly changing needs and increasing demands made on the administrative sector to support peace-keeping activities and those financed from extrabudgetary resources.

29.4 Another relevant development in the context of technological innovations in the Secretariat is the establishment of an optical disk system for storage and retrieval of documentation, approved by the General Assembly in its resolution 44/201 of 21 December 1989. On the basis of the experience gained in the introduction of the technology in the area of conference and library services, applications may be extended, in phases, to other areas of common services such as human resource management, general services and public information at all duty stations.

A. Integrated management information system

TABLE 29.3. SUMMARY OF 1994-1995 ESTIMATES BY OBJECT OF EXPENDITURE

(Thousands of United States dollars)

(1) Regular budget

Object of expenditure	*1992-1993 revised appropriation*	*Resource growth*		*Total before recosting*	*Recosting*	*1994-1995 estimates*
		Amount	*Percentage*			
Staff costs[a]	-	526.1	-	526.1	39.7	565.8
General operating expenses[a]	-	1 542.3	-	1 542.3	83.6	1 625.9
Other expenditures[b]	-	10 960.3	-	10 960.3	535.4	11 495.7
Total, regular budget	-	**13 028.7**	-	**13 028.7**	**658.7**	**13 687.4**

(2) Extrabudgetary resources

1992-1993 estimated expenditures	*Source of funds*	*1994-1995 estimated expenditures*
	(a) Services in support of:	
	(i) Other United Nations organizations	
-	Support to extrabudgetary administrative structures	-
	(ii) Extrabudgetary programmes	
-	Support to extrabudgetary substantive activities	140.3
1 064.4	Technical cooperation reimbursement resources	2 957.9
3 297.2	Peace-keeping operations	3 211.7
Total *(a)* 4 361.6		**6 309.9**
	(b) Substantive activities	
	Trust Fund for Management Improvement	
30.6	and Systems Development	-
Total *(b)* 30.6		-
-	*(c)* Operational projects	-
Total *(c)* -		-
Total *(a)*, *(b)* and *(c)* 4 392.2		**6 309.9**
	Total costs	**19 997.3**

[a] Maintenance costs.

[b] Development costs.

29.5 In its resolution 43/217, the General Assembly approved the implementation of phase one of the IMIS project. Phase one involves designing and implementing modules that provide the large majority of the functionalities needed by the Organization and modules that provide bridges with existing systems, and it is intended to complete this during the biennium 1994-1995. In subsequent phases, modules whose existence and utility are contingent upon the design and implementation of the modules built in the first phase may be added.

29.6 The Secretary-General has submitted four progress reports on the implementation of the project to the General Assembly, at its forty-fourth to forty-seventh sessions (A/C.5/44/8, A/C.5/45/20, A/C.5/46/24 and A/C.5/47/27, respectively). In the fourth progress report, the Secretary-General submitted revised estimates on the total cost of the project and indicated that he did not expect that the final actual costs would differ substantially from those estimates (A/C.5/47/27, para. 55). Subsequent developments have demonstrated the difficulty in preparing reliable budgetary estimates for large and complex office automation projects such as IMIS. The estimates for the total development cost of the project submitted below reflect higher than expected expenditure requirements in consultancy services, in training of users and in staff costs related to the revised completion date of the project. The Secretary-General will submit a fifth progress report on the project to the Assembly at its forty-eighth session.

Total development costs

29.7 Development costs for 1994-1995 for phase one are estimated at $17,805,600 (at 1994-1995 rates), of which $11,495,700 is proposed to be financed from the regular budget. Estimated total expenditure for 1994-1995 from all sources of funds is presented below.

TABLE 29.4. TOTAL ESTIMATES FOR THE INTEGRATED MANAGEMENT INFORMATION SYSTEM 1989-1995

(At current prices)

(Thousands of United States dollars)

	Actual expenditure 1989-1991[a] *(1)*	*Actual expenditure 1992* *(2)*	*Estimated expenditure 1993* *(3)*	*Estimated expenditure 1989-1993* *(4)*	*Estimated expenditure 1994-1995* *(5)*	*Total estimates 1989-1995* *(6) = (4) + (5)*
General temporary assistance	1 816.7	1 064.8	1 352.1	4 233.6	3 074.8	7 308.4
Travel of staff	185.3	136.1	130.0	451.4	470.0	921.4
Training	37.0	4.0	1 453.0	1 494.0	2 365.0	3 859.0
Contractual services	7 096.3	6 184.0	7 060.3	20 340.6	8 951.5	29 292.1
Communications	47.9	27.8	35.6	111.3	50.0	161.3
Supplies and miscellaneous	41.3	41.7	47.0	130.0	127.0	257.0
Hardware	683.9	645.8	100.0	1 429.7	1 985.3	3 415.0
Software	48.6	377.4	1 459.0	1 885.0	782.0	2 667.0
Total	**9 957.0**	**8 481.6**	**11 637.0**	**30 075.6**	**17 805.6**	**47 881.2**

TABLE 29.5. CHANGES IN TOTAL ESTIMATES FOR THE INTEGRATED MANAGEMENT INFORMATION SYSTEM PROJECT

(At current prices)

(Thousands of United States dollars)

	*Estimated expenditure 1989-1993**	*Estimate for 1994-1995**	*Estimated total**	*Revised estimate for 1989-1993*	*Revised estimate for 1994-1995*	*Revised estimated total*
General temporary assistance	4 377.3	1 900.0	6 277.3	4 233.6	3 074.8	7 308.4
Travel	507.0	400.0	907.0	451.4	470.0	921.4
Training	830.5	800.0	1 630.5	1 494.0	2 365.0	3 859.0
Contractual services	24 450.2	1 475.0	25 925.2	20 340.6	8 951.5	29 292.1
Communications	102.9	40.0	142.9	111.3	50.0	161.3
Supplies and miscellaneous	141.0	50.0	191.0	130.0	127.0	257.0
Hardware	2 584.8	1 629.0	4 213.8	1 429.7	1 985.3	3 415.0
Software	1 057.7	987.5	2 045.2	1 885.0	782.0	2 667.0
Total	**34 051.4**	**7 281.5**	**41 332.9**	**30 075.6**	**17 805.6**	**47 881.2**

* See A/C.5/47/27, table 1.

General temporary assistance

29.8 Requirements estimated at $3,074,800 relate to the cost of the project team staff at Headquarters (one D-1, five P-5, three P-4, one P-3 and three General Service (Other level)) through 31 December 1994 and of regional coordinators at the P-5 level at Geneva through 30 June 1995 and the P-4 level at six offices away from Headquarters for 1994-1995. The proposed requirements reflect an increase in the estimates under this heading for 1989-1995 ($7,308,400) as compared with the previous estimates for 1989-1994 ($6,277,300) presented in document A/C.5/47/27. The increase is due to the need to maintain on board the entire team for an additional six months, to the appointment of an additional P-3 system programmer for LAN set-up and management required for the installation of IMIS both at Headquarters and other duty stations and to the longer than foreseen appointment period of the regional coordinators. With the exception of the coordinator at Geneva, regional coordinators will also be responsible for conducting local work-flow analysis, a task it was previously planned to contract out. This resulted in an increase in the costs for temporary assistance and in a corresponding decrease compared with what would have been required under contractual services.

Travel of staff

29.9 The estimated requirements ($470,000) for 1994-1995 relate to the travel of staff from offices away from headquarters to New York for review of the design for Releases 3 and 4 and for the travel of Headquarters staff to those offices for the implementation of the system, including user training. This reflects the slightly higher estimates ($921,400) for the entire period 1989-1995 as compared with the previous estimates ($907,000) owing to higher actual costs in 1992.

Training

29.10 The estimated requirements ($2,365,000) for 1994-1995 relate to the preparation of training material and an on-line context-sensitive help system, as well as courses for users at all duty stations and the technical training of staff mainly at offices away from Headquarters. The proposed requirements reflect an increase in the current estimates of the total expenditure under this heading ($3,859,000) as compared with the previous estimates ($1,630,500). The increase is due to the much higher development cost of the training material and of the on-line help system and to the number of required courses, which exceeds the previous estimates. The current estimates are also based on the experience gained for the training of Headquarters staff for Release 1. It may be recalled that no provision was made for this item in the original estimates for the IMIS project.

Contractual services

29.11 The estimated requirements ($8,951,500) for 1994-1995 relate to the completion of the system development work, to the contract for work-flow analysis at Geneva, quality assurance, testing and out-of-scope work. The proposed requirements reflect an increase in the current estimates of the total expenditure under this heading ($29,292,100) as compared with the previous estimates ($25,925,200). The main reason for the increase is the growth in the amount of out-of-scope work, including assistance in implementation activities, particularly in the areas of an applications help desk, drafting of desk procedures, coordination of conversion activities and the establishment of a library of the large number of reports required for each subsystem. The estimated requirements would have been higher but for an expected reduction in development costs, owing to the planned integration into the system of a software package (see para. 29.15).

Communications

29.12 The estimated requirements ($50,000) for 1994-1995 relate to the cost of communications between Headquarters and other duty stations. This reflects a small increase in the current estimates of the total expenditure under this heading ($161,300) compared with the previous estimates ($142,900) owing to the delayed completion of the project.

Supplies and miscellaneous

29.13 The estimated requirements ($127,000) for 1994-1995 relate to the cost of supplies and miscellaneous expenses. This reflects the higher current estimates of the total expenditure under this heading ($257,000) compared with the previous estimates ($191,000) owing to the additional stationery required for the training programme.

Hardware

29.14 The estimated requirements ($1,985,300) for 1994-1995 would cover the cost of computers at all duty stations, of servers and of personal computers for development and training purposes. The proposed requirements reflect a decrease in the current estimates of the total expenditure under this heading ($3,415,000) as compared with the previous estimates ($4,213,800). Owing to the expansion of technological innovations in prospective user units, provision for hardware has been largely restricted to direct requirements for development and training. The policy followed so far of procuring the hardware only as needed has also made it possible to take advantage of decreasing costs and to avoid obsolescence.

Software

29.15 The estimated requirements for software ($782,000) for 1994-1995 reflect an increase in the current estimates of the total expenditure under this heading ($2,667,000) as compared with the previous estimates ($2,045,200). The increase is due to the planned integration of a software package used in parts of the Organization for procurement activities. This increase in costs is offset by a reduction in what would otherwise have been required for contractual services.

Financing arrangements

29.16 In his report on the establishment of the project to the forty-third session of the General Assembly (A/C.5/43/24), the Secretary-General proposed that, since it would encompass all the administrative activities of the Organization, its financing should not be restricted to the regular budget. Based on the distribution of 1986-1987 expenditures between the regular budget, peace-keeping activities (excluding troop payments) and other extrabudgetary activities, the following cost-sharing formula was proposed:

	Percentage
Regular budget	65.1
Peace-keeping accounts	7.4
Programme support accounts	27.5

In its resolution 43/217, the General Assembly approved implementation of the project and authorized the Secretary-General to administer flexibly and to allocate among the cost centres identified in his report the total cost established for the project.

29.17 In view of the subsequent evolution of the balance of expenditures between funding sources and the longer than anticipated timetable for implementation, the Secretary-General indicated to ACABQ, in the context of its consideration of his fourth progress report (A/C.5/47/27), that he proposed to adjust the cost-sharing formula for financing the project. In its report (A/47/7/Add.8), the Advisory Committee requested the Secretary-General to review further the cost-sharing formula and to report thereon to the General Assembly at its forty-eighth session.

29.18 The Secretary-General has reviewed this cost-sharing formula on the basis of expenditures since 1986-1987 and a number of relevant factors have also been taken into account. Firstly, there has been a significant increase in the size and scope of peace-keeping activities. Secondly, the original formula did not take into account the fact that support costs had been waived in full or in part for a number of trust funds, primarily of a humanitarian nature, and that thus a substantial proportion of funds were not contributing income to the programme support accounts. Thirdly, the new regime for technical cooperation activities is expected to diminish support cost earnings.

29.19 Since most of the costs of IMIS will be incurred in 1992-1995, it is proposed to use expenditures for 1990-1991 as the basis for a revised cost-sharing formula.

29.20 As in the original formula, reimbursements to troop-contributing Governments would be excluded. These expenditures relate to reimbursements at standard rates of extra and extraordinary costs incurred by Governments in providing troops to United Nations peace-keeping operations. In 1990-1991 these amounted to 25.3 per cent of peace-keeping expenditures, as compared with 58 per cent under the original formula. The figures have been further adjusted to exclude non-overhead earning expenditures, so that the share of the programme support accounts is commensurate with the income earned in those accounts. Taking into account these adjustments, the formula would be as follows:

	Percentage
Regular budget	64.9
Peace-keeping	17.7
Programme support	17.4

29.21 Using the new cost-sharing formula and the revised estimated total cost of the project, as outlined below, disbursements to the IMIS account and outstanding requirements through 1994-1995 are shown below:

(Thousands of United States dollars)

	Total requirements 1989-1995	*Disbursements to IMIS account through 30 June 1993*	*Balance*
Regular budget	31 074.9	19 579.2	11 495.7
Peace-keeping accounts	8 475.0	4 835.0	3 640.0
Programme support accounts[a]	8 331.3	4 199.4	4 131.9
	47 881.2	**28 613.6**	**19 267.6**

[a] Includes transfer of the balance of the Trust Fund for Management Improvement and Systems Development ($30,570).

29.22 The resulting situation with regard to regular budget requirements is summarized in table 29.6.

TABLE 29.6. REGULAR BUDGET APPROPRIATIONS AND REMAINING REQUIREMENTS

(Thousands of United States dollars)

	Appropriations
1989	3 424.0
1990-1991	9 287.8
1992-1993	6 867.4
Total 1989-1993	19 579.2
1994-1995	11 495.7
Grand total 1989-1995	31 074.9

As indicated above, it is proposed to reduce the regular budget share from 65.1 per cent to 64.9 per cent. On this basis, the regular budget share for 1994-1995 would be $11,495,700, which is included in table 29.3 under other expenditures. This takes into account a reduction of $60,100, which is the difference resulting from the change in the regular budget share from 65.1 per cent to 64.9 per cent during the period 1989-1993. The total appropriations from the regular budget for the period 1989-1995 would amount to $31,074,900.

Resource requirements (at 1992-1993 rates) for the regular budget share of IMIS costs, including maintenance costs

29.23 As indicated in the fourth progress report of the Secretary-General on IMIS (A/C.5/47/27, paras. 74-78), in addition to the hardware and software maintenance costs, a provision is required to cover the cost of staff carrying out additional work related to the maintenance of the existing system and the preparation of the conversion to the new system until the end of 1995. It is proposed to finance these maintenance costs from the regular budget and they are included under staff costs and general operating expenses in table 29.3.

Staff costs

29.24 The estimated requirements ($526,100) would provide for one P-5, three P-4 and one P-3 posts for New York in 1995 for activities related to the maintenance of the existing systems until they are phased out, for tuning of the new system, development of new reports, technical support for offices away from headquarters and additional support to new users of computerized systems.

General operating expenses

29.25 The estimated requirements ($1,542,300) relate to the following:

(a) The costs of the maintenance contract with the contractor who would be responsible, under the terms of the warranty, for the modifications to the system and for supervising the modifications made by the United Nations staff ($665,900). This arrangement would enable the Organization to maintain the warranty of the system while the transfer of knowledge necessary for future maintenance to be done by the United Nations itself would be undertaken in close cooperation with the contractor. These are non-recurrent costs, which are not expected to be required beyond 1995;

(b) Maintenance costs for proprietary software used in conjunction with IMIS for 1994 and 1995, including the maintenance cost of the software package that is planned to be integrated with IMIS ($369,900);

(c) Maintenance costs for hardware for 1994 and 1995 ($506,500).

The estimates for maintenance costs for software and hardware take into account the fact that the first year of maintenance is included in the purchase price of the equipment for all duty stations.

Other expenditures

29.26 The provision under this heading ($10,960,300 at current 1992-1993 rates, or $11,495,700 at 1994-1995 rates) is proposed for the 1994-1995 portion of the revised regular budget contribution to the total development costs of the IMIS project, as outlined in paragraphs 29.7 to 29.15.

B. Optical disk storage and retrieval system

TABLE 29.7. SUMMARY OF 1994-1995 ESTIMATES BY OBJECT OF EXPENDITURE

(Thousands of United States dollars)

Object of expenditure	*1992-1993 revised appropriation*	*Resource growth*		*Total before recosting*	*Recosting*	*1994-1995 estimates*
		Amount	*Percentage*			
General operating expenses	-	1 556.0	-	1 556.0	84.0	1 640.0
Furniture and equipment	-	3 576.0	-	3 576.0	192.7	3 768.7
Total	**-**	**5 132.0**	**-**	**5 132.0**	**276.7**	**5 408.7**

29.27 The optical disk storage and retrieval system, approved by the General Assembly in its resolution 44/201, is intended to establish a fully operational system for the storage of United Nations parliamentary documentation on optical disk as coded text or image-based documents and serve as an on-line retrieval of such documents by remote computer workstations for display on screen or for print-out. It is also intended to provide high-speed transmission of such documents to United Nations duty stations, offices and missions of Member States and other users world wide.

29.28 The long-term goal of this system is to establish more economical and secure means of distributing and storing parliamentary documentation and to provide timely access to such documents in electronic form to all offices of the United Nations, to missions to the United Nations and other government offices as appropriate, to other organizations of the United Nations system, to the mass media, to other international organizations and to other interested institutions, such as libraries and universities.

29.29 The parliamentary documentation, stored on-line in databases at United Nations Headquarters in New York and the United Nations Office at Geneva, and described and indexed using the structure and descriptors of the United Nations Bibliographic Information System (UNBIS), includes pre-session, in-session and post-session documentation for meetings of the General Assembly, the Security Council, the Economic and Social Council and their subsidiary bodies, and of the Trusteeship Council, as well as the documentation of United Nations-sponsored conferences. The documents are stored in all official languages of the United Nations: Arabic, Chinese, English, French, Russian and Spanish.

29.30 The objectives of the system are to increase the speed and reduce the costs of world-wide distribution; to provide more economical and secure means of storage; to facilitate reference to these documents by users world wide; and to provide a central repository of electronic documents for United Nations staff members involved in the preparation and processing of parliamentary documentation.

29.31 The system is being implemented in two identical configurations at Headquarters in New York and at the Palais des Nations in Geneva. The system has the capacity in both locations to input documents in both text form (from word processing) and image form (from optical scanning), with descriptors and indexing based on UNBIS, to store the documents on optical disk, to retrieve them for viewing, downloading and printing, and to transmit them in electronic form between Geneva and New York.

29.32 Parliamentary documentation produced in New York beginning in 1992 is described, indexed and stored on optical disk at Headquarters; parliamentary documentation produced at Geneva is described, indexed and stored on optical disk at the United Nations Office at Geneva. A daily exchange of documents in electronic form between New York and Geneva ensures that the optical disk databases at each location are complete and up to date. Each site can thus act as backup for the other. Provision is made for the automatic transfer of inquiries to the database in the other location whenever the system in one location is not operating.

29.33 Over 300 documents are archived daily on the optical disk systems in Geneva and New York. A total of over 60,000 documents has been loaded so far. Twenty-seven user workstations had been connected by September 1993 in Geneva and 25 in New York. The availability of the system was announced to the permanent missions of Member States in New York in September 1993 and 40 missions have already expressed interest.

29.34 The optical disk project, which is being implemented in three phases, will be completed during the biennium 1994-1995. During phase III of the system, which is to be implemented in 1994-1995, it is planned to increase the number of users considerably both in Geneva and New York. The planned establishment of a world-wide data communications network for IMIS at the end of 1993 will also help increase the number of users. Thus, depending on available capacity, users from all duty stations of the Secretariat would be able to access the optical disk system. The first CD-ROM product containing the resolutions and decisions of the main organs of the United Nations will be produced as a by-product of the system during the biennium 1994-1995. Print-on-demand is also expected to become a widely used feature of the optical disk system during the biennium.

Resource requirements (at current rates)

General operating expenses

29.35 A provision of $1,556,000 is proposed to cover the following expenditures:

(a) Facilities management services for New York ($400,000) and for Geneva ($360,000);

(b) Maintenance of equipment for New York and Geneva ($520,000);

(c) Rental and maintenance for two jukeboxes, one each for New York and Geneva ($276,000).

Furniture and equipment

29.36 A provision of $3,576,000 is proposed to cover the following expenditures:

(a) Acquisition of equipment, including two upgraded servers to provide for database growth, 800 additional users and continuous and fault-tolerant operation of the system ($1,600,000), communications servers providing 100 additional access ports at each site for external users ($300,000), and two additional high-speed printers for printing documents on demand ($400,000);

(b) Workstation licence fees for 1,000 additional users ($526,000);

(c) Upgrading and development of software to provide for the CD-ROM product containing the resolutions and decisions ($100,000), full-text search capability ($100,000) and a facsimile document retrieval function for users who access the system over slower transmission lines ($150,000);

(d) Site preparation and remodelling costs for New York and Geneva ($400,000).